

***LineUp With Math™* Alignment**  
**Mathematics Content Standards and**  
**Performance Standards (Grade Level Expectations) [PSGLEs]**  
**Fourth Edition – March 2006**

**Content Standard A: Mathematical Facts, Concepts, Principles, and Theories**

**Content Strand: Estimation and Computation**

***Estimation:***

**PSGLE**

The student determines reasonable answers to real-life situations, paper/pencil computations, or calculator results by

**[5] E&C-1** identifying or using [a variety of **L**] strategies (e.g., rounding to appropriate place value, multiplying by powers of ten, using front-end estimation to estimate the results of addition or subtraction computations from tenths to 100,000, including money, or simple multiplication or division (M3.2.1)

***LineUp With Math™* Activities**

--Predict and resolve aircraft conflicts and explain results of mathematical calculations and simulations.

--Explore and apply a variety of strategies to optimize the solution of air traffic control conflicts.

**Content Standards B, C, D, and E: Process Skills and Abilities**

**Content Strand: Problem Solving**

**PSGLE**

The student demonstrates an ability to problem solve by

**[5] PS-1** selecting and applying an appropriate strategy (e.g., tables, charts, lists, or graphs; guess and check; extended patterns; making a model) to solve a variety of problems and verify the results (M7.2.2)

***LineUp With Math™* Activities**

--Choose and apply a variety of strategies to optimize the solution of air traffic control conflicts.

**Content Strand: Communication**

**PSGLE**

The student communicates his or her mathematical thinking by

**[5] PS-3** representing problems using mathematical language including concrete, pictorial, and/or symbolic representation; or organizing and communicating mathematical problem solving strategies and solutions using mathematical language (M8.2.1, M8.2.2, & M8.2.3)

***LineUp With Math™* Activities**

--Predict and resolve aircraft conflicts and explain results of mathematical calculations and simulations.

--Use an interactive simulator plus calculation worksheets to model and resolve air traffic control conflicts.

### Content Strand: Reasoning

#### PSGLE

The student demonstrates an ability to use logic and reason by

**[5] PS-4** drawing logical conclusions about mathematical situations (given a rule or generalization, determining whether the example fits); or justifying answers and mathematical strategies as reasonable (M9.2.1, M9.2.2, & M9.2.3)

#### *LineUp With Math™* Activities

--Predict and resolve aircraft conflicts and explain results of mathematical calculations and simulations.

### Content Strand: Connections

#### PSGLE

The student demonstrates the ability to apply mathematical skills and processes across the content strands by

**[5] PS-5** using real-world contexts such as social studies, friends, and school (M10.2.1 & M10.2.2)

#### *LineUp With Math™* Activities

--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.